

### **Abstract**

An arc discharge protection apparatus to prevent arc discharge from occurring in a high voltage output zone caused by abnormal conditions includes an electrode plate to absorb  
5 high voltage arc discharge signals released by a voltage boosting unit in the high voltage output zone. A voltage switch unit receives the high voltage arc discharge signals absorbed by the electrode plate and transforms to low voltage arc discharge signals. A rectification unit receives and rectifies the low voltage arc  
10 discharge signals and outputs an arc hybrid wave. A trigger unit detects the arc hybrid wave and outputs a trigger signal to stop operation of the control unit or driving unit, thereby prevents arc discharge from causing damage to the surrounding elements resulting from accumulation of heat or sparks.

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